

THE CLAIMS

1. A hair dye or hair coloring composition comprising a mixture of:
 - A. at least one dye selected from the group consisting of oxidative dyes and direct dyes; and
 - B. a quaternary amphoteric terpolymer comprising repeating units of the following moieties
 - a. one selected from the group consisting of methacrylamidopropyl trimethyl ammonium chloride (MAPTAC) and dimethyldiallyl ammonium chloride (DMAAC),
 - b. one selected from the group consisting of acrylic acid and sodium methacrylate,
 - c. acrylamide, and
 - d. the ratio of moiety (a) to the moiety (b) being 4:1 or higher.
2. The hair dye/hair coloring composition defined in Claim 1, wherein the acrylic acid is further defined as being partly or completely neutralized into a cationic polymer.

3. The hair dye/hair coloring composition defined in Claim 1, wherein the amphoteric terpolymer is further defined as comprising a reaction product consisting of about 25 mole percent of one selected from the group consisting of acrylic acid and sodium acrylate, about 50 mole percent of methylamidopropyl trimethyl ammonium chloride, and about 25 mole percent of acrylamide.

4. The hair dye/hair coloring composition defined in Claim 1, wherein said composition is further defined as comprising between about 0% and 5% by weight based upon the weight of the entire composition of the dye, and between about 0% and 5% by weight based on the weight of the entire composition of the amphoteric terpolymer.

5. The hair dye/hair coloring composition defined in Claim 1, wherein said composition is further defined as comprising a pH ranging between about 8 and 11.

6. The hair dye/hair coloring composition defined in Claim 1, wherein said dye is further defined as comprising at least one selected from the group consisting of p-phenylenediamine, p-tolyenediamine, and its derivatives, N, N-Bis (2-hydroxyethyl)-p-phenylenediamine, p-aminophenol, 2-chloro-p-phenylenediamine, 2-methoxy-p-phenylenediamine, resorcinol, 1-naphthol, 2-amino-3-hydroxytoluene, m-aminophenol, p-amino-o-cresol, 2-methyl-resorcinol, m-phenylenediamine and mixtures thereof.

7. The hair dye/hair coloring composition defined in Claim 1, wherein said composition is further defined as being intermixed with a developer containing at least one oxidizing agent selected from the group consisting of peroxide, perborate, and percarbonate.

8. A hair dye or hair coloring composition comprising a mixture of:
 - A. between about 7% and 15% by weight based upon the weight of the entire composition consisting of at least one dye selected from the group consisting of oxidative dyes and direct dyes, dye carriers, solvents, and anti-oxidants;
 - B. between about 0.5% and 5% by weight based upon the weight of the entire composition consisting of a quaternary amphoteric terpolymer comprising repeating units of the following moieties
 1. one selected from the group consisting of methacrylamidopropyl trimethyl ammonium chloride (MAPTAC) and dimethyldiallyl ammonium chloride (DMAAC),
 2. one selected from the group consisting of acrylic acid and sodium methacrylate,
 3. acrylamide, and
 4. the ratio of moiety (a) to the moiety (b) being 4:1 or higher
 - C. between about 0% and 5% by weight based upon the weight of the entire composition consisting of linoleamidopropyl dimethylamine dimer dilinoleate;

- D. between about 0% and 8% by weight based upon the weight of the entire composition consisting of behentrimonium methosulfate;
- E. between about 0% and 5% by weight based upon the weight of the entire composition consisting of amodimethicone;
- F. between about 15% and 25% by weight based upon the weight of the entire composition consisting of additives;
- G. between about 8% and 15% by weight based upon the weight of the entire composition consisting of at least one selected from the group consisting of MEA and ammonium hydroxide; and
- H. water forming the balance.

9. A hair dye or hair coloring composition comprising a mixture of:
 - A. about 2% by weight based upon the weight of the entire composition consisting of polyquaternium -53;
 - B. about 1% by weight based upon the weight of the entire composition consisting of dyes and anti-oxidants;
 - C. about 11% by weight based upon the weight of the entire composition consisting of solvents and dye carriers;
 - D. about 3% by weight based upon the weight of the entire composition consisting of linoleamidopropyl dimethylamine dimer dilinoleate;
 - E. about 5% by weight based upon the weight of the entire composition consisting of amodimethicone;
 - F. about 12% by weight based upon the weight of the entire composition consisting of MEA and ammonium hydroxide;
 - G. about 21% by weight based upon the weight of the entire composition consisting of fatty alcohols, fattening agents and emulsifiers;
 - H. about 0.8% by weight based upon the weight of the entire composition consisting of perfume; and
 - I. water forming the balance.